

REMARKS

File History

In the last substantive and non-final Office action of 8/18/2005, elected claims 21-30 were allowed over the art of record. The Office requested that non-elected claims 1-20 and 31-35 be cancelled as directed to non-elected subject matter.

Summary of Current Response

Claims 1-20 and 31-35 are cancelled without prejudice.

Claims 36-43 are newly presented.

Arguments are presented below for why the new claims are consonant with the restriction and distinguishable over art of record.

Argument #1: New claims 36-41 are consonant with the restriction

In finalizing the restriction, the examiner understood that the signal structure itself is not the gist of the elected group, but rather a minor feature (OA page 2, last 2 paragraphs.)

Upon retrospection, Applicant agrees. The specific structure of the Z-cell is not an essential element of the disclosed invention.

The elected group is directed to a method including a "(b) conducting [of] bidding competitions between subsets of the VOQ contents to determine which of one or more smaller number of VOQ contents will be allowed to submit a passage request to a subset-associated part of a switching fabric layer;" as is recited for example in allowed Claim 21.

One of the reasons behind such bidding competitions is because the system disclosed herein is "scalable". New line cards and even shelves can be added on. (See for example: Field of Invention, paragraph [0001]: "The present disclosure of

invention relates ... more specifically to the problem of switching high-rate digital traffic from traffic source lines to dynamically-assigned traffic destination lines in a scalable manner." (Emphasis added.))

As a result of scalability, the number of ingress side signals can grow and consequently the number of signals that might compete with each other on the ingress side of a switch fabric, for getting through a same switch fabric part to a respective egress destination, can grow. Also, the number of egress destinations can grow. So a flexible way is needed for identifying the scalable number of egress destinations. A flexible way is needed for managing arbitration between an expandable number (scalable number) of ingress side signals.

Because of the flexibility possible for the number of egress destinations that may be targeted, bits have to be reserved for future growth. More specifically, such options are described at paragraphs [0162]-[0163] to wit: "The function of the 6-bit primary egress line field, 553 [of Fig. 5B] is basically given by its name. It identifies one of 64 possible destinations to which the later payload, if its request is granted, will be targeted. ... The actual line card to which the later payload is routed may be different than that indicated merely by the 6-bit primary egress line field. It may be further resolved by the 5-bit, payload destination field 524 (Fig. 5A) as described above."(Emphasis added.) So the 6 bits of field 553 (or 557) provide a first degree of flexibility (up to 64 possible destinations in the exemplary embodiment). The 5 bits of field 524 provide a second degree of flexibility (up to 32 refinements on where the destination is in the exemplary embodiment, where the combination yields $64 \times 32 = 2048$ options). {An interesting side note though, is that field 553 of a given ingressing data signal does travel at the same time with field 524 of the same ingressing data signal. One propagates during the request submitting traverse of the interconnect. The other propagates during the payload submitting traverse of the interconnect.}

By comparing paragraph (b) of original claim 21 with paragraph (b) of new claim 36, it may be seen that they are consonant with the restriction requirement. In other words, Applicant is not now submitting a claim directed at entirely different subject matter.

Argument #2: New claims 42-43 are consonant with the restriction

Although they are system claims rather than method claims, new claims 42-43 are directed to substantially the same features.

Argument #3: The new claims distinguish over Lau 6,625,121

We reference Lau '121 because some of the inventors here obviously have familiarity with that earlier work. This is not to indicate that full analysis has been done against other art of record.

Lau '121 shows in Fig. 2, an array of just fourteen VOQ's 35 and a cell path arbiter 39 that manages access to the cell paths (CP1-CP16). The cell paths, by the way go to the switch fabric, not to 16 destinations, as is better seen in Fig. 1. There are only 14 data sources and 14 data destinations --that is why there are 14 VOQ's. Cell transmission is synchronous, as is seen in Fig. 3 of Lau '121. In Fig. 4, the Request Header has bit mapped positions for all 14 of the competing VOQ's. The winning VOQ is identified by tagging its bit position in the header map. The tags are: RQST1-14: 2-Bit request

00 = no cell

01 = secondary cell request

10 = primary cell request without speedup

11 = primary cell request with speedup

No destination point identifier is stuffed in with these requests.

By contrast, new claim 36 distinguishes over Lau '121 for at least two reasons: a) the interconnect is asynchronous, and b) destination identifiers are stuffed in with the requests (winners of the first round of competition). Lau '121 does not need destination identifiers because the scheduling competition therein is fully resolved in the first round, before packets are sent to the switch fabric.

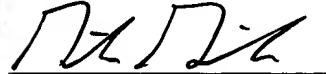
CONCLUSION

In light of the foregoing, Applicant respectfully requests consideration of the new claims and allowance thereof. Should any other action be contemplated by the Examiner, it is respectfully requested that he contacts the undersigned at (408) 392-9250 to discuss the application.

Applicant requests herewith a 1 month extension of time, giving Applicant till December 18, 2005 to respond to the outstanding action.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-2257 for any matter in connection with this response, including any fee for extension of time and/or fee for additional claims, which may be required.

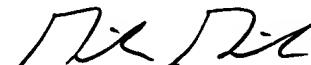
I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 28, 2005.

 11-28-05

Attorney for Applicant(s)

Date of Signature

Respectfully submitted,



Gideon Gimlan
Attorney for Applicants
Reg. No. 31,955

MacPherson Kwok Chen & Heid LLP
1762 Technology Drive, Suite # 226
San Jose, CA 95110
Tel: (408) 392-9250